List of Coleoptera Collected from Tanglefoot.

By C. A. Frost, Framingham, Mass.

The following species of beetles were taken from bands of tanglefoot on two large white oak trees in Sherborn, Massachusetts. These trees are situated in a pasture at the foot of a wooded hill and are partly surrounded by a sparse growth of hardwoods which are replaced on the east by alders that extend to an open meadow a few hundred feet away.

The results of the first visit on September 27th were so surprising that a second trip was made to secure any small specimens that had been overlooked. On the shaded side of one of the trees next the swamp most of the specimens were badly moulded and were not removed at all, while a few other specimens looked as though they had been pecked by birds. These two trees, which are nearly three feet in diameter, were banded about the first of June so that most of the material must have been entangled for many weeks and some of it for three months. Most of the specimens were dug out as mere gobs of tanglefoot and dropped into the alcohol bottle where they remained about five hours. They were then found to be very clean except for a whitish substance on a few of them. The large ones were also relaxed enough to pin while the legs and antennae of the small specimens could be drawn out by the careful use of a fine brush.

The number of rare species is the most remarkable fact in this list for, in the fourteen years of my collecting in Massachusetts, I have never before taken Cinyra gracilipes, Fornax calceatus, Catorama nigritulum, Dorcatoma dresdensis, Abstrulia tessellata, Canifa pusilla, Helodes thoracica or Heterachtes quadrimaculatus, and but single specimens of Entomophthalmus rufiolus and Callidium aereum; L. cava, S. punctatus, C. sexsignata, C. bicolor, and H. unifasciata have been exceedingly rare.

On my return from the second visit to the trees (October 3, 1914), I examined some red oaks that had been banded with tanglefoot in 1911 or 1912 and took therefrom single specimens of *Bostrychus armiger* Lec. and *Notiolophus semistriatus*

Say. They were about the only specimens in recognizable condition.

The summary of the following list shows a total of 83 specimens representing 39 species.

LIST OF SPECIES AND NUMBER OF SPECIMENS OF EACH.

- 2 Axinopalpus biplagiatus Dej.
- I Lomechusa cava Lec.
- 2 Adalia bipunctata Linn.
- 6 Scymnus punctatus Melsh.
- I Scymnus tenebrosus Muls. (?).
- I Lathropus vernalis Lec.
- I Tenebrioides corticalis Melsh.
- I Cyphon collaris Guer.
- I Cyphon variabilis Thunb.
- 6 Deltometopus amoenicornis Say.
- I Fornax calceatus Say.
- 4 Entomophthalmus rufiolus Lec.
- 8 Elater obliquus Say.
- 4 Melanotus trapezoideus Lec.
- 2 Melanotus communis Gyll.
- 4 Cinyra gracilipes Melsh.
- 3 Chrysobothris sexsignata Say.
- 6 Ellychnia corrusca Linn.
- I Cymatodera bicolor Say.
 I Helodes thoracica Guér.
- 2 Hydnocera unifasciata Say.

- 2 Hydnocera pallipennis Say.
- I Hydnocera verticalis Say.
- 2 Catorama (Hemiptychus) nigritulum Lec.
- 1 Dorcatoma dresdensis Hbst.
- 1 Cis fuscipes Mellié.
- 2 Callidium aereum Newm.
- 1 Heterachtes quadrimaculatus Newm.
- 4 Xanthonia 10-notata Say.
- 2 Dibolia borcalis Chev.
- 1 Platydema subcostatum Lap.
- 1 Mordellistena trifasciata Say.
- I Abstrulia tessellata Melsh.
- I Canifa pusilla Hald.
- 1 Pandeletejus hilaris Hbst.
- I Otidocephalus chevrolati Horn.
- I Dryophthorus corticalis Say.
- I Pityophthorus minutissimus Linn.
- I Xyleborus sp.

Photographing Insects under Magnification.

In Camera Craft for October, 1914, there appeared an article by Samuel B. Doten, Entomologist and Director of the Nevada Agricultural Experiment Station, entitled, "A Cold Flame for Zoological Work."

Judging from the title, it is not suggestive of an article that would interest entomologists, but it is, however, the results of experiments conducted in the entomological field and is excellently illustrated by half tones from photographs. These represent a few insects in their natural attitudes, and well defined, especially aphids, photographed under magnification illuminated by the intense light of fused silver wire. The paper treats mainly of sources of proper lighting without heat for photographing life under magnification. It is evident that such illumination must not have a high temperature. Entomologists desiring photographs of insects showing their natural attitudes will probably find Dr. Doten's methods of value. He promises further details in the near future should his readers be interested sufficiently to ask for them.—E. T. C., Jr.